ACCEPTED FOR PUBLICATION AT *JOURNAL OF BUSINESS RESEARCH*

Group Culture, Gender Diversity and Organizational Innovativeness: Evidence from Serbia

Ana Colovic
Strategy and Entrepreneurship Department
NEOMA Business School
1 rue du Maréchal Juin
76130 Mont Saint Aignan, France
Tel: + 33 (0)2 32 82 57 91
Email: ana.colovic@neoma-bs.fr

Christopher Williams*
Durham University Business School,
Mill Hill Lane,
Durham, DH1 3LB
United Kingdom
Tel : +44-191-334-5314
Email: chris.williams@durham.ac.uk

*corresponding author

Group culture, gender diversity and organizational innovativeness: Evidence from Serbia

Abstract

We examine the relationship between group culture – which emphasizes mentoring, teamwork and loyalty - and innovativeness in organizations. The relationship between group culture and innovativeness is assumed to be positive; group culture fosters trust and knowledge sharing which is conducive to joint creativity and collaboration necessary for the innovation process. Drawing on social categorization theory and key insights from gender studies, we develop a more nuanced argument that this positive relationship is bounded by gender diversity within the organization; organizations that are highly gender diverse will suffer from a 'rejection of others' barrier when high levels of group culture are imposed on employees. Analysis of survey data from 407 individuals working for organizations of different types and sizes in Serbia gives support to our main argument. We discuss implications of this for theory and management practice as well as policy implications for transition economies.

Key words: Innovativeness, Group culture, Gender diversity, Transition economy

Group Culture, gender diversity and organizational innovativeness: Evidence from Serbia

1. Introduction

Scholars have identified various mechanisms by which organizations can attempt to influence and control their own capability to be innovative. These control systems for innovativeness include the extent to which decision-making is decentralized to lower level workers and dispersed units (Ecker, van Triest, & Williams, 2013; Merchant & Van der Stede, 2007), the degree to which formalized control mechanisms (such as the Stage-gate approach) are used to encourage and define innovative activities in modular steps (Cooper, 2008), and the extent to which employees are encouraged to socialize and build trusting relationships with one another, i.e., an informal group culture (Henri, 2006; Quinn, 1988) that emphasizes social controls and cohesion (Burns & Stalker, 1961; Eisenhardt, 1985; O'Reilly, 1989; Ouchi, 1979). The idea of group culture[1] has been emphasized in the literature as being highly pertinent for encouraging innovativeness in the organization because it constitutes a mechanism by which trust can be established, effective communications can take place and tacit knowledge can flow between different types of employees (across departmental and hierarchical boundaries) (Ahmed, 1998; Damanpour, 1991; Henri, 2006; Wang, Guidice, Zhou, & Wang, 2017). Such tacit knowledge exchange is vital for innovativeness because it allows knowledge of new opportunities and solutions to those opportunities to be shared amongst a wider group of people with the expertise to contribute to creative endeavours (Williams & Lee, 2011).

Despite the copious literature on the relationship between aspects of group culture and innovativeness (e.g., Dovey, 2009; Ghoshal & Bartlett, 1988; Landry, Amara, & Lamari,

[1] Group culture "sees cohesion, teamwork, and morale as means to foster development, empowerment, and commitment of human resources." (Henri, 2006, p. 80)

2002; Ouchi, 1979; Wang et al., 2017), the precise nature of the relationship, and the contingencies under which the relationship holds, still remains unresolved. Some researchers, for instance, have found a positive relationship between the socialization aspect of group culture and innovation, including in the case of multinational enterprise (MNE) subsidiaries (Ghoshal & Bartlett, 1988; Williams & Du, 2014), as well as in small-and-medium sized enterprises (SMEs) and their networks (Ceci & Iubatti, 2012). Others have found a curvilinear relationship between social control and innovativeness, highlighting how increases in social control can be good for innovativeness, but only up to a point (Wang et al., 2017). Others have highlighted contingencies - such as strength of ties (Ahuja, 2000) and characteristics of the HR system (Lau & Ngo, 2004) - under which organizational cultural control will impact innovativeness. Because of the mixed findings in the literature, there have been recent calls for in-depth studies of social antecedents of organizational innovativeness (Gedajlovic, Honig, Moore, Payne, & Wright, 2013; Wang et al., 2017).

Our approach to address the unresolved question on the precise nature of the relationship between group culture and organizational innovativeness is to incorporate social categorization theory (Tajfel & Turner, 1985) in a new way. Focusing specifically on gender diversity within the organization (Díaz-García, Gonzáles-Moreno, & Sáez-Martínez, 2013; Dwyer, Richard, & Chadwick, 2003) - we hypothesize that the relationship between group culture and innovativeness will be positive and linear in organizations which are *low in gender diversity*, consistent with the positive linear effects cited in the literature (Cooke & Wills, 1999; Davidsson & Honig, 2003; Landry et al., 2002) but that the relationship will become a non-linear inverted U-shape when the organization is *high in gender diversity*[2].

Gender diversity has been a prominent strategic imperative in the inclusivity initiatives at leading innovative companies including Google, Accenture and IBM. However,

[2] A curvilinear effect between social capital and innovation was identified by Wang et al. (2017) although, typical of studies in this genre, no account was made of diversity within the organization.

little is known on the effect of gender diversity on innovativeness in transition economies. Our empirical test is conducted in the context of a transition economy - Serbia. Serbia is an ideal context for this type of study because, as an economy transitioning from a Communist past, it has sought greater levels of innovativeness in order to boost economic development and competitiveness on a global stage. Serbia is also interesting among transition economies because it suffered a number of years of isolation following several armed conflicts and imposition of economic sanctions at the end of the 20th and the beginning of the 21st century. We draw on a survey of 407 individuals working for organizations of various types and sizes in the country. After controlling for size, industry, and a number of other factors that have been identified in the literature to influence organizational innovativeness, we find strong support for our central hypothesis. In more gender homogeneous cases (either predominantly male or female) we consistently find a significant and positive relationship between group culture and innovativeness. In more gender heterogeneous cases (a balanced mix of males and females in the organization) we find that the positive effect of group culture on innovativeness only holds up to an inflection point, after which it falls.

Our study contributes to debate on how culturally-oriented management control systems (in particular, group culture (Henri, 2006)) impact organizational innovativeness. It shows how the use of group culture needs to fit with internal gender diversity, a finding that is consistent with others who have emphasized boundary conditions to broadly defined social control – innovation relationships (Lau & Ngo, 2004). We contribute to theory by bringing gender diversity into the examination of how social attributes of organizations relate to innovative outcomes and how group culture can trigger social categorization, curtailing organizational innovativeness. Finally, there are policy implications for countries in transition in terms of how to encourage innovativeness amongst their population of firms.

The remainder of the paper is structured as follows. The following section describes the theoretical framework and hypothesis development. In section 3, we detail the methodology and in section 4 we present the results of our research. In the last section we discuss the results, outline the contributions, limitations and implications of our research and suggest future research directions.

2. Theory and hypothesis development

2.1. Baseline hypothesis: group culture and innovativeness in organizations

Organizational advantages arise from a group's ability to create and share knowledge (Boisot, 1995; Cohen & Levinthal, 1990; Kogut & Zander, 1996; Nahapiet & Ghoshal, 1998; Nonaka & Takeuchi, 1995). This ability lies at the very heart of organizational innovation and creativity (Nahapiet & Ghoshal, 1998). Innovativeness can be defined as the quality of being innovative or the ability of an entity (person, group, organization) to innovate on a regular basis. It reflects the innovation-centred atmosphere in an organization and the ensuing results in terms of regular and repeated innovation outputs. The notion that innovativeness is the result of interactive, social processes rather than of individual actions of isolated individuals (Fukuyama, 1995; Landry et al., 2002) is widely accepted in the academic literature. Nahapiet & Ghoshal (1998, p. 260) argue that organizations "build and retain their advantage through the dynamic and complex interrelationships between social and intellectual capital". Social capital in organizations has indeed emerged as a significant explanatory factor of greater innovation outputs, in other words, greater innovativeness (Landry et al., 2002).

In parallel with increasing consideration of social aspects as determinants of organizational innovativeness, scholars have focused their attention on the conditions that managers can create and managerial actions they can deploy in order to foster innovativeness.

Management control is a process by which managers supervise and influence organizational members in their behaviour with the aim to achieve specific goals (Anthony & Govindarajan, 2004; Ecker et al., 2013). Management control theory distinguishes between three broad categories of controls: action controls, results controls and social controls (Eisenhardt, 1985; Merchant & Van der Stede, 2007; Ouchi, 1979). Action controls determine actions that employees need to undertake in their tasks. Results controls focus on monitoring and reward mechanisms based on well-defined performance measures. Social controls encourage employees to align the organizational goals with their own, by training the employees or by fostering a specific organizational culture – the so-called clan or group culture (Merchant & Van der Stede, 2007; Ouchi, 1979).

Group culture places a considerable emphasis on social cohesion and social interaction among organizational members (Quinn, 1988). Given the collaborative nature of innovation, the role of social cohesion and interaction in innovative performance has frequently been put forward (Adler & Kwon, 2002; Gedajlovic et al., 2013); social capital acts by bonding individuals together and by bridging different groups of individuals. Scholarly work has emphasized the impact of social cohesion and interaction on innovativeness (Ahuja, 2000) as well as the significant advantages that accrue from these processes, such as transfer of tacit knowledge, opportunity to combine ideas and competences of different people and greater trust and trustworthiness that stimulate collaboration (Nahapiet & Ghoshal, 1998). The context in which social cohesion and social interaction are emphasized encourages innovativeness (Chandler, Keller, & Lyon, 2000) because innovativeness requires trust and trustworthiness, interpersonal coordination and collaboration (Coleman, 1988; Uzzi, 1997). Social cohesion reduces the need for formal monitoring (Yli-Renko, Autio, & Sapienza, 2001), allowing firms to invest more effort into innovative activities. It generates social benefits that are advantageous to organizations

because it stimulates innovative capabilities, reduces innovation-related risks and fosters synergies (Simsek & Heavey, 2011; Xiong & Bharadway, 2011). As for social interaction, it has been found to be associated with greater knowledge acquisition (Yli-Renko et al., 2001) and greater innovation performance (Cooke & Wills, 1999). Group culture, which strongly emphasizes both social cohesion and social interaction can therefore be expected to lead to positive outcomes in terms of organizational innovativeness. Consequently, we formulate our baseline hypothesis:

Hypothesis 1: The greater the extent of group culture in an organization, the greater the organizational innovativeness.

2.2 Gender diversity, group culture and innovativeness

Whilst group culture is assumed to be positively related to innovativeness, some scholars suggest that this might not always be the case and that there should be a more fine-grained analysis of this relationship. For example, Uzzi (1997) points to the dark sides of social embeddedness and its negative impact on performance. Others highlight contingencies that influence the relationship between social attributes of organizations and performance outcomes (Gedajlovic et al., 2013; Wang et al., 2017). Scholars have pointed out that some dimensions of social capital have positive while others have negative impact on the ability of an organization to innovate (Yli-Renko et al., 2011). Some note the influence of social capital on innovation takes a curvilinear form and that contingencies such as shared vision and the alignment between firm strategy and human resource management impact this relationship (Wang et al., 2017).

One important contingency that can influence the impact of group culture on innovativeness is gender diversity in the workplace (Dwyer, Richard, & Chadwick, 2003). In

general terms, diversity is defined as differences between individuals on the attributes that lead to a perception that another person is different from the self (Roberge & van Dick, 2010; van Knippenberg, De Dreu, & Homan, 2004; Williams & O'Reilly, 1998). Diversity is "a mixture of people with different group identities within the same social system" (Nkomo & Cox, 1996, p. 339); it creates different sub-groups within the organization. Diversity reflects the degree to which there are objective or subjective differences among members (van Knippenberg & Schippers, 2007) or the distribution of differences among members of a group with respect to a specific attribute (Harrison & Klein, 2007; Jackson, Joshi, & Erhardt, 2003). Workplace diversity has been regarded as a double-edged sword (Richard, Barnett, Dwyer, & Chadwick, 2004; van Dijk, van Engen, & van Knippenberg, 2012). Some contend that diversity in terms of gender, race, culture and other traits leads to superior performance (Cox, Lobel, & McLeod, 1991) including creativity and innovation (Chua, 2018). Diversity facilitates idea generation by bringing different perspectives for problem solving. More diverse opinions and inputs will come to the fore and this can encourage innovation (Chua, 2018; Fiol, 1994). However, empirical findings often point to the negative effects of diversity on organizational outcomes (Pelled, Eisenhardt, & Xin, 1999). People can perceive members of their own social group as superior and engage in stereotyping and distancing other social groups (Tajfel, 1982, cited in Pelled et al., 1999). This can trigger reaction from the stereotyped groups and eventually lead to conflicts and hostile interactions between different groups. Pelled et al. (1999, p. 4) contend that the increase of diversity within a workgroup leads to the situations where "individuals generally will have more exchanges with those in different social categories. People in different social categories will be directly confronted with each other's negative stereotypes and self-serving biases, and emotional conflict may become more pronounced." According to these authors, demographic attributes that are not

permeable, that is, that cannot be altered, i.e. age, gender, race, and tenure, are particularly likely to yield inter-group clashes.

In this research we focus specifically on gender diversity and posit that gender diversity will moderate the otherwise positive relationship between group culture and innovativeness (i.e., Hypothesis 1, above). According to social categorization theory (Tajfel & Turner, 1985; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), people use similarities and differences as a basis for categorizing the self and others into groups, resulting in categorizations distinguishing from one's own in-group from other out-groups (Porck et al., 2018; Roberge & van Dick, 2010). Accordingly, individuals tend to identify themselves and maintain relationships with others who are similar to them in social category membership (Williams & O'Reilly, 1998), impeding their interactions with those who are different from them. People are therefore less likely to collaborate with those they see as different. Social categorization can thus lead to biased behaviour, with strong in-group preference and out-group discrimination, disrupting decision-making process and task resolution. This creates tensions within the wider organization and results in weaker knowledge integration and poorer decision-making effectiveness (Porck et al., 2018; Richard et al., 2004; Roberge & van Dick, 2010).

Gender is salient for social categorization (Dwyer, Richard, & Chadwick, 2003; Tsui, Egan, & O'Reilly, 1992; Westphal & Milton, 2000). Most studies on gender diversity in organizations are premised on the assumption that diversity is a double-edged sword with challenges accompanying the potential benefits (Shore et al., 2009). Scholars have argued that gender diversity may decrease communication (Kravitz, 2003), undermine cohesion and cooperation (Chatman & Flyn, 2001; Shapcott, Carron, Burke, Bradshaw, & Estabrooks, 2006; Triandis, Kurowski, & Gelfand, 1994), increase conflict (Pelled, 1996) and lead to stereotype-based expectations (Elsass & Grames, 1997), hampering the ability of teams to be

creative (Faems & Subramanian, 2013). Recent academic research on gender diversity in organizations suggests that its impact is complex with challenges accompanying the potential benefits (Shore et al., 2009). Scholars have also argued that gender diversity might be beneficial under some conditions (Perryman, Fernando, & Tripathy, 2016), but detrimental under others (Dwyer, Richard, & Chadwick, 2003). This suggests that it should be examined within a broader business context (Klein & Harrison, 2007; Østergaard, Timmermans, & Kristinsson, 2011), taking into consideration contingencies and management-related variables (Shore et al., 2009).

In line with the above, we argue that gender diversity in organizations has a positive impact on the relationship between group culture and innovativeness, but only up to a certain point, after which its impact will become negative. This inflection point will be the point at which the tendency to 'reject others' will take effect. We refer to this as a 'rejection of others' barrier. In those organizations where the gender composition is homogeneous, greater group culture will result in greater innovativeness. In gender homogeneous organizations, there is lower likelihood of social categorization by gender. In such a setting greater group culture will stimulate greater socialization between members, greater interaction, knowledge exchange and collaboration, leading to greater innovativeness. We therefore posit:

Hypothesis 2: In gender homogeneous organizations, where the organization is either composed mostly of males or mostly of females, there will be a positive linear relationship between group culture and innovativeness.

Conversely, when there is higher gender diversity in organizations, we argue that the relationship between group culture and innovativeness will not be linear but will take an inverted U-shaped form. When group culture is relatively low, i.e. when it is not emphasized

in organizations, organizational members are not stimulated to socialize in their tasks, which entails that the inducements for social categorization will be weak. As people will not categorize within their own group, they will naturally interact more and this will improve overall innovativeness of the organization. However, when group culture increases, the organization will stimulate people to socialize more substantially, which will, at a certain inflection point, trigger social categorization and the emergence of in-group – out-group type of behaviour. Such behaviour is detrimental to innovativeness because communication, interaction and cooperation are harmed by the rejection of others in social categorization. Consequently, when group culture reaches the 'rejection of others' barrier in gender diverse organizations, it will result in a negative effect on innovativeness. Accordingly, we hypothesize:

Hypothesis 3: In gender diverse organizations, where the organization is composed of a balanced mix of males and females, there will be an inverted U-shaped relationship between group culture and innovativeness.

3. Methodology

3.1. Data collection

Serbia was chosen for our empirical setting. Serbia is a country in transition from the ex-Yugoslav style of Communism to a liberal market economy. It has a population of 7 million people and contrary to the majority of Eastern European countries, being part of Yugoslavia meant it was not a part of the Soviet bloc. It developed its own kind of socialist economy and it was one of the founding members of the non-aligned countries. In addition to transitioning to a liberal market economy, Serbia faced a number of political issues since the 1990s: armed conflicts, NATO military intervention and economic sanctions. Consequently,

Serbia's return to the world economic scene is particularly important as the country has experienced a severe economic downturn since the outset of the transition process.

To succeed in its come-back, Serbian companies have needed to strengthen their competitiveness significantly, including through innovation (Cabrilo, Uzelac, & Cosic, 2009). In this respect, Serbia has some advantages. Its educational system, considerably developed during the Communist time, has become aligned with international standards (UNESCO, 2011). Serbia contains a high proportion of university graduates (Statistical Office of the Republic of Serbia, 2018) and a number of good-quality science and engineering educational and research institutions. Furthermore, during its Communist past, collective achievement mattered considerably more than individual achievement and collective goals, such as innovativeness at a group level were valued. This matters for our research as we focus on the moderating role of group culture in organizations. Finally, Serbia features a high proportion of women workers (Statistical Office of the Republic of Serbia, 2018); a legacy from the Communist regime where women were encouraged into employment.

We administered a questionnaire survey between June 2014 and March 2015 to a range of different types of organizations in Serbia, and used the data collected to test our hypotheses. The questionnaire was first developed in English. It was then translated into Serbian and back-translated into English to ensure reliability of the procedure (Brislin, 1986; Cascio, 2012). The questionnaire was administered in different regions of Serbia: 1 - capital Belgrade and the surrounding area; 2- Northern Serbia; 3- Western Serbia; 4- central Serbia; 5- Eastern Serbia; 6- South-East Serbia; 7-South-West Serbia. Based on the registry of organizations, held by the Chamber of commerce of Serbia, we identified organizations in these regions operating in a variety of industries. The first step consisted in contacting these organizations to inquire whether they would agree to take part in the survey. Once agreement obtained, printed versions of the questionnaire were sent with a response envelope included

for each questionnaire. The questionnaires comprised a region and a company identifier, in order to allow, where possible, the verification of the data using publicly available information. We sent questionnaires to the head-offices of organizations throughout Serbia. In an accompanying letter we asked these offices to hand out the questionnaires to employees working at different positions and different hierarchical levels of the organization. The letter explained that the survey was conducted for the academic purposes, and that there were no right or wrong answers and no judgments to be made of the organization. It assured that the anonymity of the organization and of the participants would be respected and proposed to share the findings of the study with the organization. We also asked the head-offices to encourage respondents to send the questionnaire back to us by using the enclosed stamped envelope. We contacted the organizations several times by phone or in person to remind them about the survey and to increase the chances of receiving back the questionnaires. We also asked the head-offices for some general information about the organization, including the number of employees and gender composition of the workforce. Different sectors were included in the sample (including agriculture, manufacturing, finance, services, transportation, construction, and mining). We targeted only business enterprises and not public administration bodies. We sent out 3,000 and received 472 questionnaires, a response rate of 15.7%. After accounting for missing data, the final sample was 407 (13.6% effective response rate). The Appendix shows the characteristics of the sample and the broad distribution at both organizational level and individual respondent level.

3.2 Variables and data analysis

Dependent variable: We created a scale for firm innovativeness using 3 items (we used 9-point Likert-type scale on all scale items to obtain more nuanced data (Fin, 1972) and provide a larger spectrum of choices to the respondent (Dawes, 2008)) based on (1) leaders

being entrepreneurs, innovators or risk-takers, (2) the organizational 'glue' having an orientation towards innovation and being at the cutting edge, and (3) an organizational emphasis on trying new things and prospecting new opportunities (adapted from Abernathy & Clark, 1985; Damanpour, 1991; Miles, Snow, Meyer, & Coleman, 1978). The Cronbach α for this scale was 0.81, comfortably exceeding the level recommended by Nunnally (1978).

Independent variables: We created a scale for group culture based on Henri's (2006) management control conceptualization involving cohesion, teamwork and morale. We used three items relating to: (1) leaders in the organization being mentors and facilitators, (2) management style being based on teamwork, consensus and participation, and (3) the organizational 'glue' being built on loyalty and trust. The Cronbach α for this scale was 0.79, again exceeding Nunnally's (1978) recommended level. A rotated maximum likelihood factor analysis on these six items shows they load acceptably onto two orthogonal constructs (Table 1).

Insert Table 1 Here

For gender diversity we used a questionnaire item asking the respondent "How would you best describe the gender composition of your organization? (think of the overall organization – consider employees at all levels within the organization)" with the options being: (1) mostly males; (2) mostly females; (3) a balanced mix of males and females. From this we coded a dichotomous variable for gender diversity where observations with values of mostly males or mostly females were coded as 0 (not diverse) and observations with values for a balanced mix coded as 1 (diverse). The information about the gender composition was confirmed with the publicly available data or by the head office.

Control variables: We used a number of control variables that have the potential to explain firm innovativeness. Firstly, we controlled for location within Serbia to account for

the possibility that firms in and around major cities are more innovative than those in rural areas (Shearmur, 2012). Secondly, we controlled for industry using dummy variables for knowledge-intensive services, manufacturing and finance. Thirdly, we controlled for size (number of employees) as smaller firms have been noted to exhibit higher levels of innovativeness. Fourthly, we included controls for achievement orientation (9-point Likert-scale) and efficiency orientation (9-point Likert-scale) in the organization. Achievement and efficiency orientation may be associated with innovativeness if they emphasize an aggressive mentality toward change and rejuvenation (Subramanian & Nilakanta, 1996; Utsch & Rauch, 2000). Finally, we controlled for characteristics of the respondent in terms of their tenure and education level (less than 4 years of education, 4-8 years, 9-12 years, Bachelor's degree, Master's degree, Doctorate degree). These characteristics may bias how they respond to survey questions on innovativeness in the organization. Table 2 shows the descriptive statistics for all variables in the empirical tests.

Insert Table 2 Here

We ran bi-variate correlations between the variables of interest to understand the nature of the dataset and used linear regression models with robust standard errors to test the hypotheses, first entering direct effects (Hypothesis 1), and then entering interactions between gender diversity and the squared product of group culture (to test Hypotheses 2 and 3). As a robustness test we partitioned the data into the gender homogeneous and gender diverse subsets and ran models with group culture and the squared product of group culture for each partition of the data in order to compare them (i.e., a direct test of Hypothesis 2 versus Hypothesis 3). We also ran robustness tests with alternative dependent variables, including a single item measure (9-point Likert-scale) for "Members of this organization reject others for being different" (where we would expect an inverse effect). We used this

because it goes to the heart of our logic; the potential for this rejection of those not belonging to the social category of an individual in the organization and this test allows us to examine the underlying reason for our main finding. Also, we examined the predictive margins for all models and produced plots for the main interaction models in Stata 14.0.

Finally, given an expected high correlation between innovativeness and group culture there is a likelihood of reverse causality in linear regression modelling. We identified and introduced an instrumental variable (Arellano & Bover, 1995) for group culture and ran instrumental variable tests using two-stage least squares (2SLS) in Stata 14.0. This allowed for the possibility that group culture was endogenous and therefore biasing results. We used a single item instrumental variable from the questionnaire for the organization being like an extended family – this providing instrument relevance and being more strongly correlated to group culture than to innovativeness. The item was worded as: "My organization is a very special place. It is like an extended family. People seem to share a lot of themselves". We ran four tests, with just the instrumented variable, with the control variables, with gender diversity, and with the instrumented variable and gender diversity. In each case group culture instrumented as extended family yielded a positive and significant coefficient ($p<0.001$) as expected. Tests of endogeneity allowed us to reject the null hypothesis that variables were exogenous. The Durbin statistic ranged from 12.52 – 13.38 ($p<0.001$) and the Wu-Hausman F statistic ranged from 12.79 – 13.43 ($p<0.001$). Additional first stage tests allowed us to reject a null hypothesis that the instrument was weak as the first stage minimum eigenvalue was considerably larger than all critical values in all tests.

4. Results

Bi-variate correlations are shown in Table 3 and main regression models in Table 4. The bi-variate association between innovativeness and group culture is positive and

significant, as expected ($r=0.65$, $p<0.001$). There are positive and significant correlations between achievement and efficiency orientations and innovativeness ($r=0.48$, $p<0.001$ and $r=0.54$, $p<0.001$). We would expect this in firms in a transition economy with a zest for catching up following a troubled past (Subramanian & Nilakanta, 1996; Utsch & Rauch, 2000). The coefficient between size and innovativeness is negative and significant ($r=-0.14$, $p<0.01$), again, as expected. There are no significant correlations between innovativeness and industry dummies or between group culture and industry dummies; results are not biased by industry. Interestingly, the respondent's tenure and education level are negatively correlated with their perception of innovativeness ($r=-0.13$, $p<0.05$; $r=-0.11$, $p<0.05$), a possible indication that more experienced employees, by virtue of their experience, are more cautious about portraying their firms in an innovative light.

Insert Tables 3 and 4 Here

In terms of the main regression models, size continues to have a negative impact on innovativeness, while achievement and efficiency orientations have positive and significant effects. The most conspicuous industry dummy is for knowledge-intensive services, which yields a positive and significant coefficient in four out of five models. For the hypothesized relationships, we see a strong and positive effect for group culture on innovativeness. This is consistent across all models in which group culture is entered and provides support for our baseline Hypothesis 1. To test Hypotheses 2 and 3 we examined the coefficient for the interaction of group diversity with the squared product of group culture. This is negative and significant ($b=-0.07$, $p<0.05$); in organizations with gender diversity there will be a negative impact at higher levels of group culture. The interaction plot for this effect is shown in Figure 1. The mean and maximum variance inflation factors are all below the recommended limit of 2, suggesting multi-collinearity will not affect how we interpret the results.

Insert Figure 1 Here

Table 5 shows the robustness test on partitioned data with Model 1 representing the gender homogeneous observations (n=235) and Model 2 the gender diverse observations (n=172). There is a positive and significant coefficient in both models for group culture (supporting Hypothesis 1) but the quadratic effect for group culture (which is negative at the 1% level of significance) is only significant for Model 2 and not Model 1. This provides strong additional support for Hypotheses 2 and 3. In Table 6 we report a further robustness test which seeks to predict the extent to which members of the organization reject others for being different. The result is interesting in that the squared product of group culture interacted with gender diversity gives a positive coefficient. While this is just outside significance at the 10% level, the positive sign and the margins plot (shown in Figure 2) do provide some support to the core theoretical argument. In gender homogeneous organizations, the relationship between group culture and rejecting others for being different is negative; the higher the group culture, the less likely members of the firm are hostile to those with different social categories. However, gender diversity confuses this; in these cases, we see a U-shaped relationship; at high levels of group culture the negative relationship turns positive and it is more likely that members will reject others from different social categories.

Insert Tables 5 and 6 Here

Insert Figure 2 Here

---

5. Discussion

In this study we bring together management control and social categorization theory (Tajfel & Turner, 1985) to investigate the impact of gender diversity on the relationship between group culture and organizational innovativeness. Our baseline hypothesis is an underlying positive relationship between group culture and innovativeness and our research is in line with the literature that sees innovation as the outcome of a collective process based on social cohesion, interaction and trust, as well as knowledge creation and communications within organizations (Ahuja, 2000; Damanpour, 1991; Dovey, 2009; Landry et al., 2002; Nahapiet & Ghoshal, 1998). However, whilst prior work has focused on the influence of social capital on innovativeness (Ahuja, 2000; Wang et al., 2017; Yli-Renko et al. 2001), we adopt a broader notion of "socialization" by focusing on *group culture* in the organization, which "sees cohesion, teamwork, and morale as means to foster development, empowerment, and commitment of human resources" (Henri, 2006, p. 80). Group culture therefore reflects not only the shared values, but also their actual interaction with an organization's social system to produce behavioural norms (Henri, 2006; Quinn, 1988; Uttal & Fierman, 1983).

In response to recent calls for more in-depth studies of social antecedents of innovativeness (Gedajlovic et al., 2013; Wang et al., 2017), we examine gender diversity as a key contingency that influences the group culture – innovativeness relationship. While prior research has looked at this, it has emphasized a direct linear effect (Dwyer, Richard, & Chadwick, 2003). Our approach differs because it uses social categorization theory to hypothesize that group culture will have a positive influence on innovativeness in gender homogeneous organizations, but a curvilinear inverted U-shaped influence in gender heterogeneous organizations. Our work is novel in that we combine two theories together to argue that a specific form of workplace diversity matters to how the effects of social categorization play out when it comes to the imposition of a group culture. Whilst in gender

homogeneous organizations group culture will induce social processes that will enhance innovativeness, in gender diverse organizations, social categorization processes will be triggered when a certain level of group culture in an organization is reached (we refer to this as a 'rejection of others' barrier), curtailing its otherwise positive effect on innovativeness.

Testing this theory in a transition economy is particularly interesting. Countries that have a Communist past should, in principle, be ones in which the notion of group ethos is very familiar (Xu, 2013). But literature is scant with respect to whether – and how – group culture influences innovativeness in firms in a country transitioning away from Communism. Given Serbia's national policy to catch up in terms of national technological competence, understanding the managerial environment for innovating within the country is particularly important. As predicted, group culture does indeed seem to be beneficial for innovativeness in gender homogenous organizations in Serbia, but in gender diverse ones its impact becomes negative after reaching a 'rejection of others' barrier. Our findings support those who argue that contingency matters when assessing how management control systems (in our case, group culture) influences outcomes (in our case, innovativeness) that have important implications for the future prosperity and competitiveness of the organization (Gedajlovic et al., 2013; Lau & Ngo, 2004; Wang et al., 2017). In our study the key contingency variable relates to the identities and social categories of those individuals who actually make up the social environment in the organization. This contingency line of enquiry will give researchers a more accurate picture of the influence of management control on organizational outcomes.

Social categorization is one important process that, although frequently studied in organization behaviour, has not been sufficiently examined in innovation management literature. In their conceptual study on social and intellectual capital, Nahapiet & Ghoshal (1998, p. 256) note that identification could harm knowledge exchange, when groups have different identities. Our results are supportive of their contention that "salient group

identification may not only increase the perceived opportunities for exchange but also may enhance the actual frequency of cooperation. In contrast, where groups have distinct and contradictory identities, these may constitute significant barriers to information sharing, learning, and knowledge creation (Child & Rodrigues, 1996; Pettigrew, 1973; Simon & Davies, 1996)". Our findings are also in line with the argument that group identification – in our case created on the basis of gender diversity - creates tension within the broader organization and can reduce strategic consensus between groups (Porck et al., 2018). In other words, it appears that gender is a strong identification attribute that leads to in-group out-group behaviour when the imposition of social cohesion and teamwork increases (see Table 6 and Figure 2).

The findings have real-world implications for management practice as well as for policy in transition economies. They suggest that building social cohesion within organizations and emphasizing culturally-oriented control systems (namely, group culture) should not be taken as a "one size fits all" approach to boosting organizational innovativeness. There is a fit between the organizational culture for social control and the nature of diversity within the organization. Although, in general, its impact on innovativeness is positive, there are limits to any beneficial effects of imposing a group culture and managers need to be sensitive to this. In our study, we see this with respect to gender diversity. Consequently, managers in organizations with high gender diversity should reflect on the negative effects of group culture at high levels and consider maintaining group culture at an optimal level in order to maintain innovativeness. Managers need to be aware that too much emphasis on teamwork and social cohesion could entail negative outcomes in diverse organizations because of social categorization. Management control systems that have a prominent social component that consolidates organizational members in groups should be

managed in such a way that they align with the level of internal organizational diversity. Our results suggest that if this can be done, higher levels of organizational innovation will ensue.

There are also implications for innovation policy in countries transitioning to a liberal market economy. In the Communist regime there was no (financial) compensation based on individual results, and more generally "sticking out" was not particularly valued. Performance was evaluated at the collective (group) level rather than individual level. Group achievement rather than individual achievement was important. Policy in these countries might consider how group culture within organizations needs to be retained as a property in order to promote innovation at the enterprise level, and how group culture within firms might inherit at least some aspects from the traditional values of the country. Our baseline test confirms a common theme in the innovation literature in terms of how social cohesiveness and integration builds trust and commitment amongst groups that need to share tacit knowledge in order to innovate. Transition economies generally need to catch up because of a lag in technological competence in comparison with developed countries. Prior research suggests they can do this by leveraging their advantages "in terms of existing human capital, competencies, and innovative heritage" (Krammer, 2009, p. 846). However, the current study suggests policy makers need to encourage organizations to be cognizant of how management control systems in the organization influence innovativeness, and in particular the role that gender diversity plays in this. If the organization is gender homogeneous, group culture is always a positive factor for innovativeness. But caution needs to be heeded in gender diverse organizations because of the detrimental effects at high levels of group culture. Policy makers should stimulate firms to reflect on their own internal characteristics, in particular gender diversity, and to develop internal management systems that are in line with these characteristics and that do not cause problems of internal social categorization. By doing this,

organizations within the transition economy will move towards greater levels of innovativeness with the long-term goal of stimulating economic development.

Our study has a number of limitations and also opens up avenues for future research. First, while in this paper we focus on group culture, there are other ways of classifying organizational culture and future research can examine how each of the four types of organizational culture[3] – rational, hierarchical, developmental and group - affects organizational innovativeness and how workplace diversity influences this relationship. Second, given all of the observations in our sample were derived from one country, it is difficult to generalize the findings to other settings. Because our sample includes employees from a variety of industries, we believe that it is generalizable to Serbia as a country and also to other transition and emerging economies with the communist past. However, we cannot claim that they are generalizable to other settings, in particular developed Western economies, because of the different organizational practices to those found in communist regimes. Consequently, a study based on a sample from more than one country could reach greater generalizability of the findings. Third, we did not sample public sector organizations and innovativeness in these types of organizations will deserve some specific attention in the future from the perspective of diversity and social categorization. Fourth, we did not conduct interviews or case studies to uncover the micro-dynamics of social cohesion at higher levels of group culture. These methodological approaches could be used in the future to uncover more nuances in the social categorization process and advance understanding of organizational diversity and its interaction with organizational processes in social categorization. Fifth, our study does not include country-level variables, which could also play a role in organizational innovativeness. Thus, national culture or economic-transition-

[3] Organizational culture reflects shared values that interact with organization's structures and control systems to produce behavioural norms (Henri, 2006; Uttal & Fierman, 1983). Building on the distinction between control and flexibility, four main types of organizational culture have been identified in the literature: rational, hierarchical, developmental and group culture (Quinn, 1988).

related variables could be explored in future research. Our findings raise fresh questions for understanding organizational innovativeness, including: What role do other aspects of workplace diversity play on the relationship between group culture and innovativeness? How would the theory presented here play out in situations where multiple organizations work together on innovative projects? Does the 'rejection of others' barrier apply in equal measure to different types of innovation projects (such as product, process, service, and even managerial innovation)? Further research and answers to these questions are needed to build on the findings of the present study and develop our understanding of how group culture interacts with gender and other forms of diversity to influence innovativeness in organizations.

References

Abernathy, W. J., & Clark, K. B. (1985). Innovation: Mapping the winds of creative destruction. *Research Policy, 14*(1), 3-22.

Adler, P. S., & Kwon, S.-W. (2002). Social capital: Prospects for a new concept. *Academy of Management Review, 27*(1), 17–40.

Ahmed, P. K. (1998). Culture and climate for innovation. *European Journal of Innovation Management, 1*(1), 30-43.

Ahuja, G. (2000). Collaboration networks, structural holes, and innovation: A longitudinal study. *Administrative Science Quarterly, 45*(3), 425-455.

Anthony, R. N., & Govindarajan, V. (2004). *Management control systems* (11th ed.). New York: McGraw-Hill.

Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics, 68*(1), 29-51.

Boisot, M. (1995). *Information space: a framework for learning in organizations, institutions and culture*. London: Routledge.

Brislin, R. W. (1986). Research instruments. *Field Methods in Cross-Cultural Research* Vol. 8 (pp. 137-164). Beverly Hills: Sage

Burns, T., & Stalker, G. M. (1961). *The management of innovation*. London: Tavistock.

Cabrilo, S., Uzelac, Z., & Cosic, I. (2009). Researching indicators of organizational intellectual capital in Serbia. *Journal of Intellectual Capital, 10*(4), 573-587.

Cascio, W. F. (2012). Methodological issues in international HR management research. *International Journal of Human Resource Management, 23*(12), 2532-2545.

Ceci, F., & Iubatti, D. (2012). Personal relationships and innovation diffusion in SME networks: A content analysis approach. *Research Policy, 41*(3), 565-579.

Chandler, G. N., Keller, C., & Lyon, D. W. (2000). Unraveling the determinants and consequences of an innovation-supportive organizational culture. *Entrepreneurship Theory and Practice, 25*(1), 59–76.

Chatman, J. A., & Flynn, F. J. (2001). The influence of demographic heterogeneity on the emergence and consequences of cooperative norms in work teams? *Academy of Management Journal, 44*(5), 956–974.

Child, J., & Rodrigues, S. (1996). The role of social identity in the international transfer of knowledge through joint ventures. In: S. R. Clegg, & G. Palmer (Eds.) *The politics of management knowledge* (pp. 46-68). London: Sage.

Chua, R. Y. (2018). Innovating at cultural crossroads: How multicultural social networks promote idea flow and creativity. *Journal of Management, 44*(3), 1119-1146.

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly, 35*(1), 128-152.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology, 94*, S95–S120.

Cooke, P., & Wills, D. (1999). Small firms, social capital and the enhancement of business performance through innovation programmes. *Small Business Economics, 13*(3), 219-234.

Cooper, R. G. (2008). Perspective: The stage-gate® idea-to-launch process - update, what's new, and nexgen systems. *Journal of Product Innovation Management, 25*(3), 213-232.

Cox, T., Lobel, S. A., & McLeod, P. L. (1991). Effects of ethnic group cultural differences on cooperative and competitive behavior on a group task. *Academy of Management Journal, 34*(4), 827−847.

Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, *34*(3), 555-590.

Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, *18*(3), 301-331.

Dawes, J. (2008). Do data characteristics change according to the number of scale points used? An experiment using 5-point, 7-point and 10-point scales. *International Journal of Market Research*, *50*(1), 61-77.

De Dreu, C. K., & West, M. A. (2001). Minority dissent and team innovation: The importance of participation in decision making. *Journal of Applied Psychology*, *86*(6), 1191−1201.

Díaz-García, C., González-Moreno, A., & Jose Sáez-Martínez, F. (2013). Gender diversity within R&D teams: Its impact on radicalness of innovation. *Innovation*, *15*(2), 149-160.

Dovey, K. (2009). *The role of trust in innovation*. *The Learning Organization*, *16*(4), 311-325.

Dwyer, S., Richard, O. C., & Chadwick, K. (2003). Gender diversity in management and firm performance: The influence of growth orientation and organizational culture. *Journal of Business Research, 56*(12), 1009-1019.

Ecker, B., van Triest, S., & Williams, C. (2013). Management control and the decentralization of R&D. *Journal of Management*, *39*(4), 906-927.

Eisenhardt, K. M. (1985). Control: Organizational and economic approaches. *Management Science, 31*(2), 134-149.

Elsass, P. M., & Grames, L. M. (1997). Demographic diversity in decision-making groups: The experiences of women and people of color. *Academy of Management Review*, *22*(4), 946−973.

Faems, D., & Subramanian, A. M. (2013). R&D manpower and technological performance: The impact of demographic and task-related diversity. *Research Policy*, *42*(9), 1624-1633.

Fin, R. H. (1972). Effects of some variations in rating scale characteristics on the means and reliabilities of ratings. *Educational and Psychological Measurement*, *21*(2), 255-265.

Fiol, C. M. (1994). Consensus, diversity, and learning in organizations. *Organization Science, 5*(3), 403-420.

Fukuyama, F. (1995). *Trust: the social virtues and the creation of prosperity*. New York: The Free Press.

Gedajlovic, E., Honig, B., Moore, C. B., Payne, G. T., & Wright, M. (2013). Social capital and entrepreneurship: A schema and research agenda. *Entrepreneurship Theory and Practice*, *37*, 455–478.

Ghoshal, S., & Bartlett, C. A. (1988). Creation, adoption and diffusion of innovations by subsidiaries of multinational corporations. *Journal of International Business Studies*, *19*(3), 365-388.

Harrison, D. A., & Klein, K. J. (2007). What's the difference? Diversity constructs as separation, variety, or disparity in organizations. *Academy of Management Review*, *32*(4), 1199–1228.

Henri, J-F. (2006). Organizational culture and performance measurement systems. *Accounting, Organizations and Society*, *36*(1), 77-103.

Jackson, S. E., Joshi, A., & Erhardt, N. L. (2003). Recent research on team and organizational diversity: SWOT analysis and implications. *Journal of Management*, *29*(6), 801–830.

Klein K. J., & Harrison, D. A. (2007). On the diversity of diversity: tidy logic, messier realities. *Academy of Management Perspectives*, *21*(4), 26–33.

Krammer, S. M. S. (2009). Drivers of national innovation in transition: Evidence from a panel of Eastern European countries. *Research Policy*, *38*(5), 845-860.

Kravitz, D. A. (2003). More women in the workplace: is there a payoff in firm performance? *Academy of Management Executive*, *17*(3), 148–149.

Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, *3*(3), 383-397.

Landry, R., Amara, N., & Lamari, M. (2002). Does social capital determine innovation? To what extent?. *Technological Forecasting and Social Change*, *69*(7), 681-701.

Lau, C. M., & Ngo, H. Y. (2004). The HR system, organizational culture, and product innovation. *International Business Review*, *13*(6), 685-703.

Merchant, K. A., & Van der Stede, W. A. (2007). *Management control systems: performance measurement, evaluation and incentives*. Harlow: Pearson Education.

Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman Jr, H. J. (1978). Organizational strategy, structure, and process. *Academy of Management Review*, *3*(3), 546-562.

Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, *23*(2), 242–266.

Nkomo, S. M., & Cox, T. (1996). Diverse identities in organizations, In S. R. Clegg, C. Hardy, & W. R. Nord (Eds.) *Handbook of organization studies* (pp. 338-356). London: Sage.

Nonaka, I., & Takeuchi, H. (1995). *The knowledge creating company*. New York: Oxford University Press.

Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw Hill.

O'Reilly, C. (1989). Corporations, culture, and commitment: Motivation and social control in organizations. *California Management Review*, *31*(4), 9-25.

Østergaard, C. R., Timmermans, B., & Kristinsson, K. (2011). Does a different view create something new? The effect of employee diversity on innovation. *Research Policy*, *40*(3), 500-509.

Ouchi, W. G. (1979). A conceptual framework for the design of organizational control mechanisms. In *Readings in Accounting for Management Control* (pp. 63-82). Boston: Springer.

Pelled, L. (1996). Demographic diversity, conflict, and work group outcomes: An intervening process theory. *Organization Science*, *7*(6), 615−631.

Pelled, L., Eisenhardt, K., & Xin, K. (1999). Exploring the black box: An analysis of work

group diversity, conflict, and performance, *Administrative Science Quarterly*, *44*(1), 1–28.

Perryman, A. A., Fernando, G. D. and Tripathy, A. (2016). Do gender differences persist? An examination of gender diversity on firm performance, risk, and executive compensation. *Journal of Business Research*, *69*(2), 579-586.

Pettigrew, A. M. (1973). *The politics of organizational decision making*. London: Tavistock.

Porck, J. P., van Knippenberg, D., Tarakci, M., Ateş, N. Y., Groenen, P. J., & de Haas, M. (2018). Do group and organizational identification help or hurt intergroup strategic consensus?. *Journal of Management*, published online, 0149206318788434.

Quinn, R. E. (1988). *Beyond rational management*. San Francisco: Jossey-Bass Inc. Publishers.

Richard, O. C., Barnett, T., Dwyer, S., & Chadwick, K. (2004). Cultural diversity in management, firm performance, and the moderating role of entrepreneurial orientation dimensions. *Academy of Management Journal*, *47*(2), 255-266.

Roberge, M. E., & van Dick, R. (2010). Recognizing the benefits of diversity: When and how does diversity increase group performance? *Human Resource Management Review*, *20*(4), 295-308.

Shapcott, K. M., Carron, A. V., Burke, S. M., Bradshaw, M. H., & Estabrooks, P. A. (2006). Member diversity and cohesion and performance in walking groups. *Small Group Research*, *37*(6), 701–720.

Shearmur, R. (2012). Are cities the font of innovation? A critical review of the literature on cities and innovation. *Cities*, *29*, S9-S18.

Shore, L. M., Chung-Herrera, B. G., Dean, M. A., Ehrhart, K. H., Jung, D. I., Randel, A. E., & Singh, G. (2009). Diversity in organizations: Where are we now and where are we going?. *Human Resource Management Review*, *19*(2), 117-133.

Simon, L., & Davies, G. (1996). A contextual approach to management learning. *Organization Studies*, *17*(2), 269-289.

Simsek, Z., & Heavey, C. (2011). The mediating role of knowledge-based capital for corporate entrepreneurship effects on performance: A study of small- to medium-sized firms. *Strategic Entrepreneurship Journal*, *5*(1), 81–100.

Statistical Office of the Republic of Serbia (2018). *Statistical yearbook of the Republic of Serbia 2017*. Belgrade: Statistical Office of the Republic of Serbia.

Subramanian, A., & Nilakanta, S. (1996). Organizational innovativeness: Exploring the relationship between organizational determinants of innovation, types of innovations, and measures of organizational performance. *Omega*, *24*(6), 631-647.

Tajfel, H., & Turner, J. C. (1985). The social identity theory of intergroup behavior. In S. Worchel, & W. G. Austin (Eds.) *Psychology of intergroup relations* (pp. 7-24). Chicago: Nelson-Hall.

Triandis, H. C., Kurowski, L. L., & Gelfand, M. J. (1994). Workplace diversity. In M. D. Dunnette & LM. Hough (Eds.) *Handbook of industrial and organizational psychology* (Vol. 4) (pp. 769-827). Palo Alto, CA: Consulting Psychologists Press.

Tsui, A. S., Egan, T. D., & O'Reilly, C. A. (1992). Being different: Relational demography and organizational attachment. *Administrative Science Quarterly*, *37*(4), 549−579.

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (Eds.). (1987). *Rediscovering the social group*. Oxford: Blackwell.

UNESCO (2011). *World data on education: Serbia*. Geneva: UNESCO - International Bureau of Education.

Utsch, A., & Rauch, A. (2000). Innovativeness and initiative as mediators between achievement orientation and venture performance. *European Journal of Work and Organizational Psychology*, *9*(1), 45-62.

Uttal, B., & Fierman, J. (1983). The corporate culture vultures. *Fortune*, *108*, 66–72.

Uzzi, B. (1997). Social structure and competition in interfirm networks: The paradox of embeddedness. *Administrative Science Quarterly*, *42*(1), 35–67.

van Dijk, H., van Engen, M. L., & van Knippenberg, D. (2012). Defying conventional wisdom: A meta-analytical examination of the differences between demographic and job-related diversity relationships with performance. *Organizational Behavior and Human Decision Processes*, *119*(1), 38-53.

van Knippenberg, D., De Dreu, C. K., & Homan, A. C. (2004). Work group diversity and group performance: an integrative model and research agenda. *Journal of Applied Psychology*, *89*(6), 1008-1022.

van Knippenberg, D., & Schippers, M. C. (2007). Work group diversity. *Annual Review of Psychology*, *58*, 515−541.

Wang, S., Guidice, R., Zhou, Y., & Wang, Z. M. (2017). It's more complicated than we think: The implications of social capital on innovation. *Asia Pacific Journal of Management*, *34*(3), 649-674.

Westphal, J. D., & Milton, L. P. (2000). How experience and network ties affect the influence of demographic minorities on corporate boards. *Administrative Science Quarterly*, *45*(2), 366–398.

Williams, C., & Du, J. (2014). The impact of trust and local learning on the innovative performance of MNE subsidiaries in China. *Asia Pacific Journal of Management*, *31*(4), 973-996.

Williams, C., & Lee, S. H. (2011). Entrepreneurial contexts and knowledge coordination within the multinational corporation. *Journal of World Business*, *46*(2), 253-264.

Williams, K. Y., & O'Reilly, C. A. (1998). Demography and diversity in organizations: A review of 40 years of research. In B. M. Staw & L. L. Cummings (Eds.) *Research in Organisational Behaviour Vol. 20* (pp. 77-140). Connecticut: Jai Pres.

Xiong, G., & Bharadwaj, S. (2011). Social capital of young technology firms and their IPPO values: The complementary role of relevant absorptive capacity. *Journal of Marketing*, *75*(6), 87–104.

Xu, X. (2013). Belonging before believing: Group ethos and bloc recruitment in the making of Chinese communism. *American Sociological Review*, *78*(5), 773-796.

Yli-Renko, H., Autio, E., & Sapienza, H. J. (2001). Social capital, knowledge acquisition, and knowledge exploitation in young technology-based firms. *Strategic Management Journal*, *DiaCooke*(6-7), 587-613.

Table 1

Scale construction and rotated factor solution using maximum likelihood method

Item	Factor 1 Group Culture	Factor 2 Innovativeness
Leaders in my organization are generally considered to be entrepreneurs, innovators or risk takers.		0.63
The glue that holds my organization together is orientation toward innovation and development. There is an emphasis on being on the cutting edge.		0.68
My organization emphasizes acquiring new resources and meeting new challenges. Trying new things and prospecting for new opportunities are valued.		0.72
Leaders in my organization are generally considered to be mentors, facilitators, or parental figures.	0.52	
The management style in my organization is characterized by teamwork, consensus, and participation.	0.74	
The glue that holds my organization together is loyalty and mutual trust. Commitment to my organization runs high.	0.76	
Cronbach α	0.79	0.81

N=407; Loadings < 0.5 not shown

Table 2

Variable information

Variable	Mean	Std. Dev.	Min	Max
Innovativeness	4.70	2.07	1	9
Location	3.68	2.11	1	7
Services dummy	0.55	0.50	0	1
Manufacturing dummy	0.17	0.38	0	1
Finance dummy	0.07	0.25	0	1
Size	1.85	0.81	1	3
Achievement orientation	5.46	2.45	1	9
Efficiency orientation	5.83	2.32	1	9
Tenure (ln)	2.09	1.07	0	3.69
Education	4.11	0.89	1	6
Gender diversity	0.42	0.49	0	1
Group culture	5.32	2.06	1	9

Table 3

Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11
Innov. 1											
Location 2	0.03										
Services 3	0.02	-0.03									
Manuf. 4	0.06	0.03	-0.49***								
Finance 5	-0.06	0.05	-0.29***	-0.12*							
Size 6	-0.14**	-0.05	-0.01	0.00	0.05						
Achievement 7	0.48***	0.06	-0.10*	0.17***	-0.04	-0.01					
Efficiency 8	0.54***	0.03	-0.10*	0.10*	-0.01	-0.08	0.41***				
Tenure(ln) 9	-0.13*	0.01	0.09+	0.04	-0.06	0.20***	-0.13**	-0.20***			
Education 10	-0.11*	-0.16**	0.11*	-0.11*	0.00	0.03	-0.11*	-0.11*	0.16***		
Gender div.11	0.07	-0.05	-0.11*	0.06	0.09+	0.12*	-0.04	-0.06	0.03	0.16**	
Group cult. 12	0.65***	-0.03	0.02	0.01	-0.06	-0.15*	0.48***	0.56***	-0.19***	-0.11*	-0.01

N=407, +$p < 0.1$; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Table 4

Regression models (robust standard errors in parenthesis)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Location	-0.01 (0.04)	-0.003 (0.04)	0.02 (0.04)	0.03 (0.04)	0.03 (0.04)
Services dummy	0.42+ (0.22)	0.48* (0.21)	0.30 (0.20)	0.35+ (0.19)	0.44* (0.19)
Manufacturing dummy	0.06 (0.26)	0.01 (0.26)	0.19 (0.23)	0.15 (0.23)	0.17 (0.23)
Finance dummy	-0.03 (0.30)	-0.12 (0.29)	0.08 (0.27)	0.01 (0.27)	0.02 (0.28)
Size	-0.29** (0.11)	-0.33*** (0.10)	-0.18+ (0.10)	-0.22* (0.10)	-0.20* (0.10)
Achievement	0.28*** (0.04)	0.29*** (0.04)	0.17*** (0.04)	0.17*** (0.04)	0.18*** (0.04)
Efficiency	0.35*** (0.04)	0.36*** (0.04)	0.19*** (0.05)	0.20*** (0.05)	0.17*** (0.05)
Tenure(ln)	0.03 (0.08)	0.04 (0.08)	0.07 (0.08)	0.08 (0.07)	0.03 (0.07)
Education	-0.09 (0.09)	-0.15 (0.09)	-0.05 (0.08)	-0.10 (0.08)	-0.11 (0.08)
Gender diversity (GD)		0.63*** (0.17)		0.52*** (0.16)	-0.67 (0.67)
Group culture (GC)			0.44*** (0.06)	0.42*** (0.06)	0.71*** (0.21)
GD x GC					0.65* (0.32)
GC^2					-0.03 (0.02) (p=0.11)
GD x GC^2					-0.07* (0.03)
Constant	1.70	1.67	0.45	0.46	-0.04
Max VIF	1.62	1.63	1.74	1.75	
Mean VIF	1.24	1.23	1.34	1.33	
F	37.93***	41.41***	64.49***	60.68***	56.68***
R-squared	0.40	0.42	0.51	0.53	0.54

N=407; +$p < 0.1$; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Table 5

Robustness tests on partitioned data (robust standard errors in parenthesis)

Variable	Model 1 (n=235) Gender Homogeneous	Model 2 (n=172) Gender Diverse
Location	0.05 (0.05)	0.02 (0.06)
Services dummy	0.69** (0.26)	0.21 (0.26)
Manufacturing dummy	0.53 (0.34)	-0.22 (0.28)
Finance dummy	0.88* (0.38)	-0.60+ (0.36)
Size	-0.26* (0.13)	-0.14 (0.15)
Achievement	0.23*** (0.05)	0.11+ (0.06)
Efficiency	0.14* (0.06)	0.18* (0.07)
Tenure(ln)	0.21 (0.10)	-0.10 (0.12)
Education	-0.06 (0.11)	-0.14 (0.14)
Group culture (GC)	0.70** (0.22)	1.42*** (0.29)
GC^2	-0.02 (0.02)	-0.10*** (0.03)
Constant	-0.75	-0.03
F	43.58***	34.60***
R-squared	0.56	0.55

$+p < 0.1$; $*p < 0.05$; $**p < 0.01$; $***p < 0.001$

Table 6

Robustness tests using single item dependent variables (robust standard errors in parenthesis)

Variable	Model 1 Members of the organization rejecting others for being different
Location	0.12+ (0.06)
Services dummy	0.36 (0.34)
Manufacturing dummy	0.13 (0.41)
Finance dummy	-0.46 (0.57)
Size	0.29+ (0.16)
Achievement	-0.18** (0.06)
Efficiency	-0.08 (0.07)
Tenure(ln)	0.17 (0.14)
Education	0.26+ (0.14)
Gender diversity (GD)	1.86 (1.39)
Group culture (GC)	-0.13 (0.44)
GD x GC	-0.96 (0.60)
GC^2	-0.01 (0.04)
GD x GC^2	0.09 (p=0.11) (0.06)
Constant	4.46
F	7.01***
R-squared	0.18

N=407; +$p < 0.1$; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Fig. 1. Moderating effect of gender diversity on the relationship between group culture and innovativeness

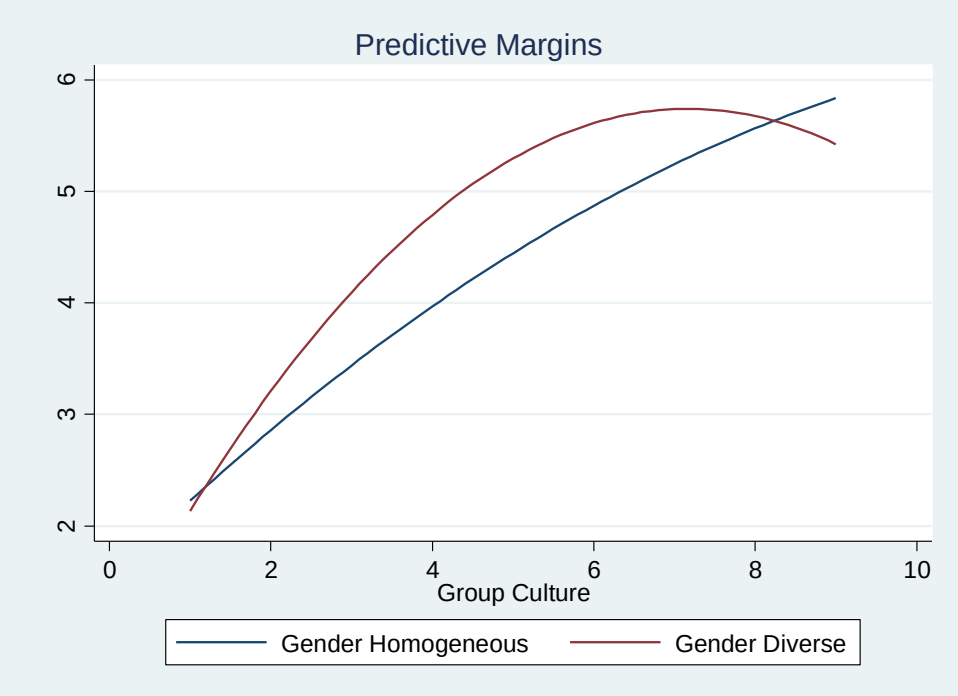
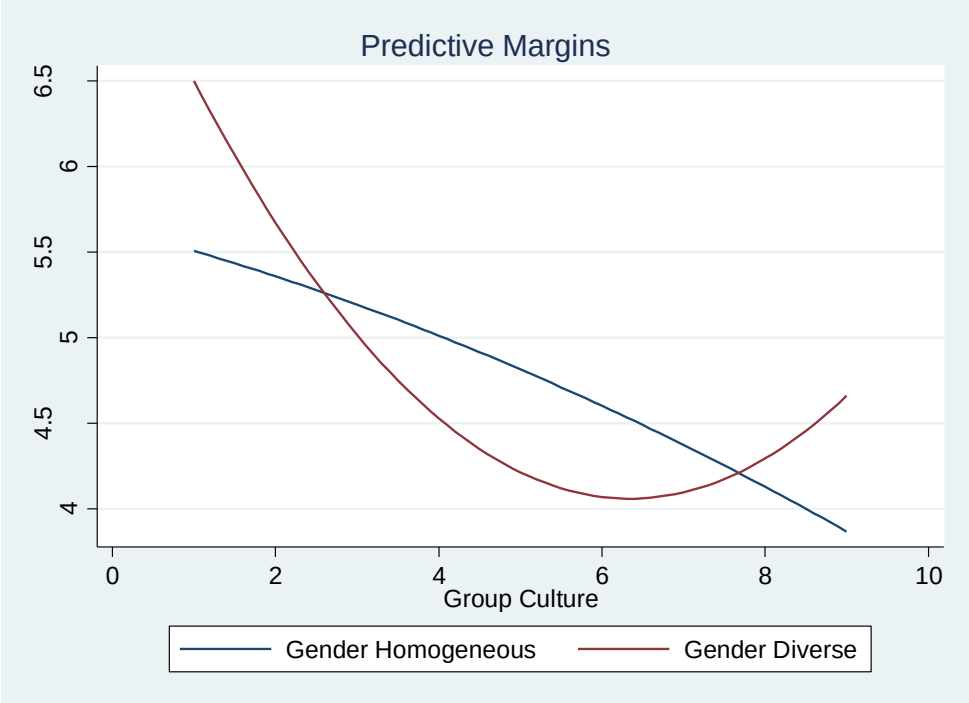


Fig. 2. Effect of group culture and gender diversity on the propensity to reject others for being different



APPENDIX

Characteristics of the Sample (n=407) (proportion of sample in parenthesis)

Organizational characteristics		**Respondent characteristics**	
Region	Belgrade (22.36%)	Age	Mean = 42.91 years
	Northern Serbia (15.97%)		Youngest =19
	Western Serbia (11.06%)		Oldest = 65
	Central Serbia (11.06%)		
	Eastern Serbia (11.06%)		
	South-east Serbia (18.18%)		
	South-west Serbia (10.32%)		
Industry	Agriculture, forestry, fishing (1.25%)	Education (highest level attained)	4 or fewer years completed (0.25%)
	Manufacturing (9.02%)		5 to 8 years completed (0.74%)
	Finance, insurance, real estate (6.77%)		9 to 12 years completed (21.87%)
	Service (health, legal, hotel, business) (55.89%)		Bachelor's degree (51.60%)
	Transportation, communication, utilities (17.29%)		Master's degree (16.22%)
	Construction (8.27%)		Doctorate degree (9.34%)
	Mining (1.50%)		
Size	Less than 100 employees (41.28%)	Gender	Female (50.37%)
	100 to 1,000 employees (32.68%)		Male (49.63%)
	More than 1,000 employees (26.04%)		
		Tenure in organization	Mean = 12.60 years
			Lowest = 1
			Highest = 40